Package 'rmerec'

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Type Package

Title MEREC - Method Based on the Removal Effects of Criteria

Version 0.1.1

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Description Implementation of the MEthod based on the Removal Effects of Criteria - MEREC- a new objective weighting method for determining criteria weights for Multiple Criteria Decision Making problems, created by Mehdi Keshavarz-Ghorabaee (2021) <doi:10.3390/sym13040525>. Given a decision matrix, the function return the Merec´s weight vector and all intermediate matrix/vectors used to calculate it.

License GPL (>= 3)

URL https://github.com/lucassp/rmerec

Imports utils

Language en-US

Encoding UTF-8

RoxygenNote 7.2.3

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

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Repository CRAN

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merec_weights	*Method based on the Removal Effects of Criteria - MEREC Implementation of the MEthod based on the Removal Effects of Criteria - MEREC More information about the method at https://doi.org/10.3390/sym13040525 More information about the implementation at https://github.com/lucassp/rmerec Given a decision matrix, the function return the Merec weight´s vector.*

Description

Method based on the Removal Effects of Criteria - MEREC Implementation of the MEthod based on the Removal Effects of Criteria - MEREC More information about the method at https://doi.org/10.3390/sym13040525 More information about the implementation at https://github.com/lucassp/rmerec Given a decision matrix, the function return the Merec weight´s vector.

Usage

```
merec_weights(data, alternatives, optimizations)
```

Arguments

data	A numeric data matrix in the format of a DECISION MATRIX, columns are the criteria, rows are the alternatives
alternatives	A character vector with the identification of alternatives
optimizations	A character vector with definition of minimization or maximization for each criterion, expected 'min' or 'max' only

Value

A numeric vector with MEREC Weights (wj) and all matrix/vectors used to calculate it

Examples

```
alternatives <- c("A1", "A2", "A3", "A4", "A5")
optimizations <- c("max", "max", "min", "min")

data <- matrix(c(
  c(450, 10, 100, 220, 5),          # criterion 1 values
  c(8000, 9100, 8200, 9300, 8400),  # criterion 2 values
  c(54, 2, 31, 1, 23),              # criterion 3 values
  c(145, 160, 153, 162, 158)        # criterion 4 values
), nrow=5, ncol=4)

result <- merec_weights(data, alternatives, optimizations)
```

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